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Potential for joint work seen in sensors arena

by Tina Barton, Arnold Air Force Base

Col. Larry Strawser

ARNOLD AFB, Tenn. — What began as a speaking engagement for the National Engineers Week Banquet became an avenue for potential collaborative working arrangements between the Air Force Research Laboratory's Sensors Directorate and Arnold Engineering Development Center (AEDC).

When Col. Larry Strawser, deputy director of the Sensors Directorate, Air Force Research Laboratory (AFRL) at Wright-Patterson AFB, Ohio, visited AEDC for National Engineers Week, he was surprised at the center's complexity and uniqueness, especially in ground testing of aerospace systems.

"I'm really glad I came down to AEDC, and I really appreciate the hospitality," Strawser said. "I was not familiar with the many diverse and unique capabilities at the Center. We have a lot of similar projects in the sensors arena, and there is a potential for several working relationships in future sensor ground testing before actual flight testing."

Reflecting on the future of America's defense programs, Strawser referred to the important role the Air Force will play in meeting national security objectives and realizing the full-spectrum dominance envisioned by Joint Vision 2020.

"A key aspect of that vision is that we have become the expeditionary aerospace force," Strawser said. "As we improve our expeditionary capabilities, we will necessarily need to increase our intelligence, surveillance and reconnaissance capabilities and better link our command and control. This is significant to AEDC's sensor testing in that the work they do will allow future battlespace information to get to the right person at the right place at the right time to make accurate and timely combat decisions."

Strawser envisions a cradle-to-grave scenario in which the test and evaluation community would be on board with technology development from the beginning of projects.

"Studies show if you look at total lifecycle costs, most of the cost is incurred early on in the research and evaluation phase," Strawser said. "If we could test project components as they are being developed instead of waiting for the complete product, we could help drive down the total lifecycle costs. By bringing the test and evaluation and technology communities on board early in the project, they can be better prepared for testing components when the system nears production.

"This allows them to plan for adding or upgrading facilities to meet the upcoming testing needs instead of waiting until it's nearly time to test and then deciding they need to make changes or additions. There's definitely a need to bring the test and evaluation and technology development communities together through some collaborative efforts between the two."

He also included AEDC in the Sensors Directorate's long-range vision.

"Someday in the future, we will have an integrated web of air, space and ground sensors that will be linked to each other and to the warfighter which will provide complete, continuous battlespace awareness," Strawser said. "We will know where any militarily significant target is and what it's doing while being able to deny our adversary the same information and deceive them about U.S. forces. In other words, we will know better than our adversary about what he is doing. The sensor testing done at AEDC can help us fulfill this vision."

Part of that vision involves an air vehicle called SensorCraft that Strawser emphasized is still in the concept phase.

According to the colonel, the SensorCraft concept calls for building a suite of sensors and then designing a compatible aircraft to utilize the sensor suite, instead of building an aircraft and then adding the sensors. The suite, potentially combining the current sensor capabilities of multiple

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surveillance and reconnaissance platforms, would provide decision-quality information to command and control centers on the ground at a location far away from where the actual aircraft mission occurs. **@**